This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-10. (canceled)

11. (previously presented) A skin treatment device, comprising:

a body having a first planar surface which is placed against a patient's skin, the first planar surface includes a first area, and includes a second area which defines an aperture adjacent the first area;

a cooling element disposed in the body, said cooling element operating to cool the first area; and

a radiation source disposed in the body, the radiation source positioned to emit radiation through the aperture, whereby radiation energy is applied to the patient's skin.

12. (previously presented) The device according to claim 11, wherein said radiation source comprises an optical chamber configured to emit radiation through said aperture, and an optical fiber entrance in which an optical fiber can be housed to permit tissue-damaging radiation to pass from the optical fiber into the optical chamber.

13. (previously presented) The device of claim 12, further including a window disposed in said optical chamber, such that tissue damaging radiation is transmitted through the window prior to being transmitted through the aperture.

14. (previously presented) The device of claim 11, wherein the aperture is rectangular.

15. (previously presented) The device of claim 11, wherein the aperture is square.

16. (previously presented) The device according to claim 13, wherein the optical chamber comprises light-reflecting walls which help to equalize the fluence of radiation passing through the aperture.

17. (previously presented) The device according to claim 13, further comprising a heating element thermally coupled to the optical chamber so to permit heating of the optical chamber.

18. (previously presented) The device according to claim 11, wherein the aperture has an aperture dimension along a direction of motion, and the first area has a first area dimension along the direction of motion.

19. (previously presented) A skin treatment device, comprising:

a body having a first planar surface which is placed against a patient's skin, the first planar surface includes a first area, and includes a second area which defines an aperture adjacent the first area;

a cooling element disposed in the body, said cooling element operating to cool the first area; and

a radiation source disposed in the body, the radiation source positioned to emit radiation through the aperture, whereby radiation energy is applied to the patient's skin

wherein the aperture has an aperture dimension along a direction of motion, and the first area has a first area dimension along the direction of motion; and

wherein the first area dimension is at least about two times the aperture dimension.

20. (previously presented) A skin treatment device, comprising:

a body having a first planar surface which is placed against a patient's skin, the first planar surface includes a first area, and includes a second area which defines an aperture adjacent the first area;

a cooling element disposed in the body, said cooling element operating to cool the first area; and

a radiation source disposed in the body, the radiation source positioned to emit radiation through the aperture, whereby radiation energy is applied to the patient's skin;

wherein the aperture has an aperture dimension along a direction of motion, and the first area has a first area dimension along the direction of motion; and

wherein the first area dimension is about equal to the aperture dimension multiplied by a first chosen time interval for cooling the patient's skin, the result divided by a second chosen time interval between applications of the damaging radiation.

21. (previously presented) A skin treatment device, comprising:

a body having a first planar surface which is placed against a patient's skin, the first planar surface includes a first area, and includes a second area which defines an aperture adjacent the first area;

a cooling element disposed in the body, said cooling element operating to cool the first area; and

a radiation source disposed in the body, the radiation source positioned to emit radiation through the aperture, whereby radiation energy is applied to the patient's skin;

wherein said radiation source comprises an optical chamber configured to emit radiation through said aperture, and an optical fiber entrance in which an optical fiber can be housed to permit tissue-damaging radiation to pass from the optical fiber into the optical chamber;

a window disposed in said optical chamber, such that tissue damaging radiation is transmitted through the window prior to being transmitted through the aperture; and

wherein the window comprises an inner window and an outer, user-replaceable window.

22. (previously presented) The device according to claim 11, wherein the body is a hand-grippable body.

23. (previously presented) A tissue treatment method comprising:

determining a diameter of a structure in a patient's tissue to be treated;

inputting a laser-pulse duration into an input of a tissue treatment device, with the pulse duration that is input being selected in response to the determined diameter of the structure to be treated, the selecting being performed so treatment of a structure having smaller diameter results in a shorter pulse duration than treatment of a structure having a larger diameter; and

applying laser energy to a treatment area of the patient's tissue, with the tissue treatment device, to cause thermal injury to the structure.

24. (previously presented) The method of claim 23, further comprising:

selecting a size of a treatment area, and varying a lens system to provide a treatment area according the selected size of the treatment area.

25. (previously presented) The method according to claim 23, further comprising the step of selecting a chosen one of a laser-pulse amplitude and a laser-pulse fluence prior to the applying step.

26. (previously presented) The method according to claim 24, further comprising the step of selecting a chosen one of a laser-pulse amplitude and a laser-pulse fluence prior to the applying step.

27. (previously presented) The method according to claim 23, wherein the laser energy applying step is carried out by:

positioning a cooling element of the tissue treatment device against a first target area on the patient's skin;

moving, after a chosen cooling period of time, the cooling element from the first target area to a second target area with a window overlying the first target area;

applying the laser energy to the first target area through the window with the window overlying the first target area.

28. (previously presented) The method according to claim 27, further comprising moving, after the laser energy applying step, the window to overlay the second target area while positioning a second cooling surface against the first target area.

29. (previously presented) The method according to claim 27, wherein the moving step is carried out with the chosen cooling period of time being about 0.25 to two seconds.

30. (previously presented) The method according to claim 27, further comprising the step of selecting a tissue treatment device using laser energy having an average wavelength in the 800 to 1200nm range.

31. (previously presented) The method according to claim 23, further comprising the step of selecting a tissue treatment device using laser energy having a wavelength of about 1.06 microns.

32. (previously presented) The method according to claim 23, wherein the selecting step is carried out so that hair diameters from about 25 to 150 micrometers result in laser-pulse durations of about 5 to 50 milliseconds.

33. (previously presented) A skin treatment device, comprising:

a body having a skin-contacting end;

a skin-cooling element carried by the body and having a cooling surface at the skin-contacting end;

a radiation source carried by the body and positioned to transmit tissue damaging radiation to a patient's skin;

a lens system carried by the body, and wherein the lens system is positioned such that it is not in contact the patient's skin, and positioned between the light radiation source and the patient's skin, such that the tissue damaging radiation is transmitted through the lens system, prior to being incident on the patient's skin, wherein a focal length of the lens system can varied, whereby a size of a treatment area is varied by changing the focal length.

34. (previously presented) The skin treatment device of claim 33, further including:

a laser supplying laser light to the radiation source for passage through the lens system.

35. (previously presented) The skin treatment device of claim 34, further including:

a laser-power input whereby a user can input a laser-pulse duration.

36. (previously presented) The skin treatment device of claim 34, further including:

a laser-power input whereby a user can input a laser-pulse amplitude.

37. (previously presented) The skin treatment device of claim 34, further including:

a laser-power input whereby a user can input a laser-pulse fluence.

38. (previously presented) The skin treatment device of claim 34, further including:

a laser-power input whereby a user can input a laser-pulse duration, and one of a laser-pulse amplitude and a laser pulse fluence.

39. (previously presented) The skin treatment device of claim 33, wherein the lens system is laterally offset from the cooling surface.

40. (previously presented) The skin treatment device of claim 33, wherein the body includes a viewport which permits viewing of the treatment area.

41. (previously presented) A dermatologic tissue treatment device comprising:

a body having a skin-contacting end;

a skin-cooling element carried by the body and having a cooling surface at the skin-contacting end;

a radiation source carried by the body and having a recessed window through which tissue treating radiation passes to a patient's skin;

said recessed window being laterally offset from the cooling surface;

said recessed window being spaced apart from the cooling surface in a direction away from the patient's skin when the cooling surface is contacting the patient's skin so to create a gap between the recessed window and the patient's skin; and

an open region between the recessed window and the skin to permit viewing of the patient's skin under the recessed window.

42. (previously presented) The device according to claim 41, wherein the window comprises an inner window and an outer, user-replaceable window.

43. (previously presented) The device according to claim 41, wherein the body is a hand-grippable body.

44. (previously presented) The device according to claim 41, wherein the cooling surface is a high lubricity surface to help prevent bonding between the cooling surface and skin.

45. (previously presented) The device according to claim 41, wherein the skin cooling element comprises first and second of said cooling surfaces with the recessed window being located between said first and second cooling surfaces.

46. (previously presented) The device according to claim 41, wherein said radiation source comprises an optical chamber having an exit aperture covered by said recessed window and an optical fiber entrance in which an optical fiber can be housed to tissue treating radiation to pass from the optical fiber into the optical chamber.

47. (previously presented) The device according to claim 46, wherein the exit aperture is rectangular.

48. (previously presented) The device according to claim 47, wherein the exit aperture is square.

49. (previously presented) The device according to claim 46, wherein the optical chamber comprises light-reflecting walls which help to equalize the fluence of radiation passing through the exit aperture.

50. (previously presented) The device according to claim 46, further comprising a heating element thermally coupled to the optical chamber so to permit heating of at least a part of the optical chamber.

51. (previously presented) The device according to claim 41, wherein the cooling surface is adjacent to the recessed window and is aligned with the recessed window along a direction of motion.

52. (previously presented) The device according to claim 51, wherein the recessed window and the cooling surface have window and cooling surface have dimensions along the direction of motion.

53. (previously presented) A dermatologic tissue treatment device comprising:

a body having a skin-contacting end;

a skin-cooling element carried by the body and having a cooling surface at the skin-contacting end;

a radiation source carried by the body and having a recessed window through which tissue treating radiation passes to a patient's skin;

said recessed window being laterally offset from the cooling surface;

said recessed window being spaced apart from the cooling surface in a direction away from the patient's skin when the cooling surface is contacting the patient's skin so to create a gap between the recessed window and the patient's skin; and

an open region between the recessed window and the skin to permit viewing of the patient's skin under the recessed window

wherein the cooling surface is adjacent to the recessed window and is aligned with the recessed window along a direction of motion;

wherein the recessed window and the cooling surface have window and cooling surface have dimensions along the direction of motion; and

wherein the cooling surface dimension is at least about two times the window dimension.

54. (previously presented) A dermatologic tissue treatment device comprising:

a body having a skin-contacting end;

a skin-cooling element carried by the body and having a cooling surface at the skin-contacting end;

a radiation source carried by the body and having a recessed window through which tissue treating radiation passes to a patient's skin;

said recessed window being laterally offset from the cooling surface;

said recessed window being spaced apart from the cooling surface in a direction away from the patient's skin when the cooling surface is contacting the patient's skin so to create a gap between the recessed window and the patient's skin; and

an open region between the recessed window and the skin to permit viewing of the patient's skin under the recessed window;

wherein the cooling surface is adjacent to the recessed window and is aligned with the recessed window along a direction of motion;

wherein the recessed window and the cooling surface have window and cooling surface have dimensions along the direction of motion; and

wherein the cooling surface dimension is about equal to the window dimension multiplied by a first chosen time interval for cooling the patient's skin, the result divided by a second chosen time interval between applications of the tissue treating radiation.

55. (previously presented) The device according to claim 54, further comprising an user-removable clip releasably mounting the outer window to the body adjacent to the inner window.

56. (previously presented) A dermatologic tissue treatment device comprising:

a body having a skin-contacting end;

a skin-cooling element carried by the body and having a cooling surface at the skin-contacting end;

the body having a recessed window through which tissue treating radiation passes to a patient's skin; and

said recessed window being laterally offset from the cooling surface;

said recessed window being spaced apart from the cooling surface in a direction away from the patient's skin when the cooling surface is contacting the patient's skin, such that an open region is created between the recessed window and an area of the patient's skin, and the open region provides a view port.

57. (previously presented) The device of claim 56, wherein the view port allows for direct viewing of the area of the patient's skin.

58. (previously presented) The device of claim 56, wherein the view port allows for viewing of the area of the patient's skin through a transparent member.

59. (previously presented) The device of claim 56, further including a lens system between the radiation source and the recessed window.

60. (previously presented) The device of claim 59, wherein lens system can be adjusted to change of the focal length of the lens system, whereby a size of a treatment area can be varied by changing the focal length.

Claims 61-65 (canceled)